

Technical Memorandum

Date: February 9, 2023
To: Kris Pinero, Rodeo Credit Enterprises, LLC
From: Sarah Brandenberg, Biling Liu
Subject: Lancaster TTM 83315 VMT Assessment Memo

LA21-3278

Fehr & Peers has completed quantifying Vehicle Miles Traveled (VMT) for the Tentative Tract Map No. 083315 (TTM 83315) housing project (the Project) in the City of Lancaster. The project is proposing a 103-unit single family residential subdivision on a vacant land within the area bounded by Lancaster Boulevard to the north, 30th Street East to the west, 35th Street East to the east, and Avenue J to the south. This assessment compares Home-based VMT per capita generated by the Project to the City's adopted threshold of 15% below Baseline VMT of Antelope Valley. This VMT analysis is consistent with requirements of Senate Bill 743 (SB 743), the Office of Planning and Research's (OPR's) Technical Advisory, and the *City of Lancaster Department of Public Works Local Transportation Assessment Guidelines* (January 2021).

The remainder of this memorandum is divided into four sections: Project Introduction, Modeling Methodology, VMT Analysis, and Conclusions.

1. Project Introduction

The Project is located in the eastern area of Lancaster Boulevard on a site bounded by Nugent Street to the north, 30th Street East to the west, 35th Street East to the east, and Avenue J to the south. The Project proposes 103 single-family dwelling units on a vacant land. **Figure 1** presents the Project site plan.

2. Modeling Methodology

The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) trip-based model is a travel demand forecasting model with socioeconomic and transportation network inputs, such as population, employment, and the regional and local roadway network, that estimates current travel behavior and forecasts future changes in travel demand. The current SCAG model has 2012 as the base year and 2040 as the forecast year and can be used to estimate VMT for current year 2021 conditions. The 2040 model contains the planned transportation improvements in the RTP and the growth projections in the SCS.

Table 1 presents the socioeconomic inputs for the Project. The Project population was estimated by referring to population per household ratio of Project Transportation Analysis Zone (TAZ) in SCAG 2012 base year model.

Table 1: Land Uses Review

Project TAZ SED	Households	Population
Proposed Project	103	361

When calculating VMT for a project site, the VMT methodology should match the methodology used to establish the Baseline VMT metrics and impact thresholds. For residential projects in the City of Lancaster, Baseline VMT is defined as a measurement of Home-Based VMT per capita, which reflects all trips that begin or end at a residential unit within the Los Angeles County Antelope Valley Planning Area (Antelope Valley). All home-based auto vehicle trips are traced back to the residence of the trip-maker (non-home-based trips are excluded) and then divided by the population within the geographic area to get the efficiency metric of home-based VMT per capita.

Following the VMT analysis, the Home-Based VMT per capita of the Project was then compared to the Antelope Valley Baseline VMT to determine if it exceeds the City's impact threshold.

3. VMT Assessment

The Home-Based VMT per capita of the Project was calculated for existing year (2021) using the SCAG travel demand model. While the project will be built over time, the Year 2021 analysis shows how the VMT generated by the Project compares to current travel and VMT characteristics in the area. **Table 2** shows the Home-Based VMT per capita of the Project.

Table 2: Project Baseline VMT and VMT Threshold for Residential Project in Lancaster

VMT Metrics for Housing Projects	Home-Based VMT per capita
Project VMT Estimates (2021)	22.4
Antelope Valley Planning Area (AVPA) Baseline VMT (2021)	20.1
Threshold: 15% Below AVPA Baseline VMT	17.1
Percent Higher than VMT Threshold	31%
Significant VMT Impact?	Yes

As shown above, the Project generates 22.4 Home-based VMT per capita in existing year 2021. In comparison to the City's threshold of 15% below Baseline VMT, the Project is 5.3 Home-based VMT per capita higher and would result in a significant VMT impact. The higher VMT generated by the project is due to its location in the more suburban area of Lancaster with lower development densities that can result in longer travel distance in comparison to broader Antelope Valley area.

To mitigate the Project's VMT impact, the Home-Based VMT per capita needs to be reduced by 31%. This VMT reduction equates to 1,913 total VMT as shown in **Table 3**. Given the size and location of the Project, on-site mitigation strategies are limited and would not reduce VMT to a level needed to eliminate the VMT impact. The City recently adopted \$150 per VMT mitigation fee for the VMT impact fee program. Therefore, the Project's VMT impacts will be reduced by contributing \$ 2,786 per unit to the City's VMT impact fee program.

Table 3: VMT Reduction Required and Mitigation Fee

Home-Based VMT for Residential	Project VMT Estimate	VMT Threshold (15% below Baseline)	Reduction Required
VMT / capita	22.4	17.1	5.3
Total VMT	8,086	6,173	1,913
Total Mitigation Fee (\$)			286,950
Fee/Unit (\$)			2,786

5. Conclusions

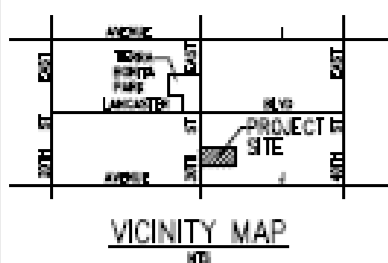
This technical memorandum documents the process to determine the potential VMT impacts of the proposed residential project in the City of Lancaster. The following summarizes the results of the VMT analysis:

- The VMT analysis for the Project is based on the City's new guidance for transportation impacts. The VMT analysis methodology for the Project is consistent with the methodology

used to establish the Baseline VMT metrics and impact thresholds for projects in the City of Lancaster.

- For residential projects in the City of Lancaster, the Home-Based VMT per capita is analyzed to determine the VMT impact.
- The Home-Based VMT per capita generated by the Project under base year (2021) was compared to the Antelope Valley Baseline VMT.
- The Project generates 22.4 Home-based VMT per capita in the base year (2021) which is 31% higher than the City's threshold. Therefore, the project would result in a significant VMT impact.
- The Project's VMT impacts will be reduced by contributing to the City's recently adopted VMT impact fee program.

TENTATIVE TRACT MAP NO. 083315



OWNER

ROYAL INVESTORS GROUP, LLC
 5555 WILSON BLVD., SUITE 702
 BEVERLY HILLS, CA 90212
 (310) 407-1000

ENGINEER

DUKE ENGINEERING
 CIVIL & STRUCTURAL
 1410 300A AVENUE
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LEGAL DESCRIPTION

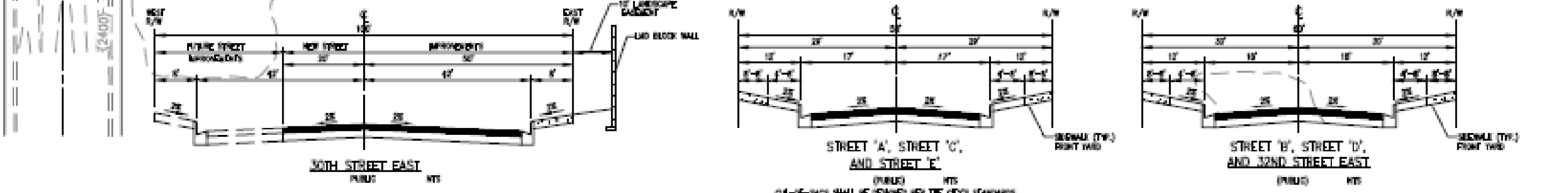
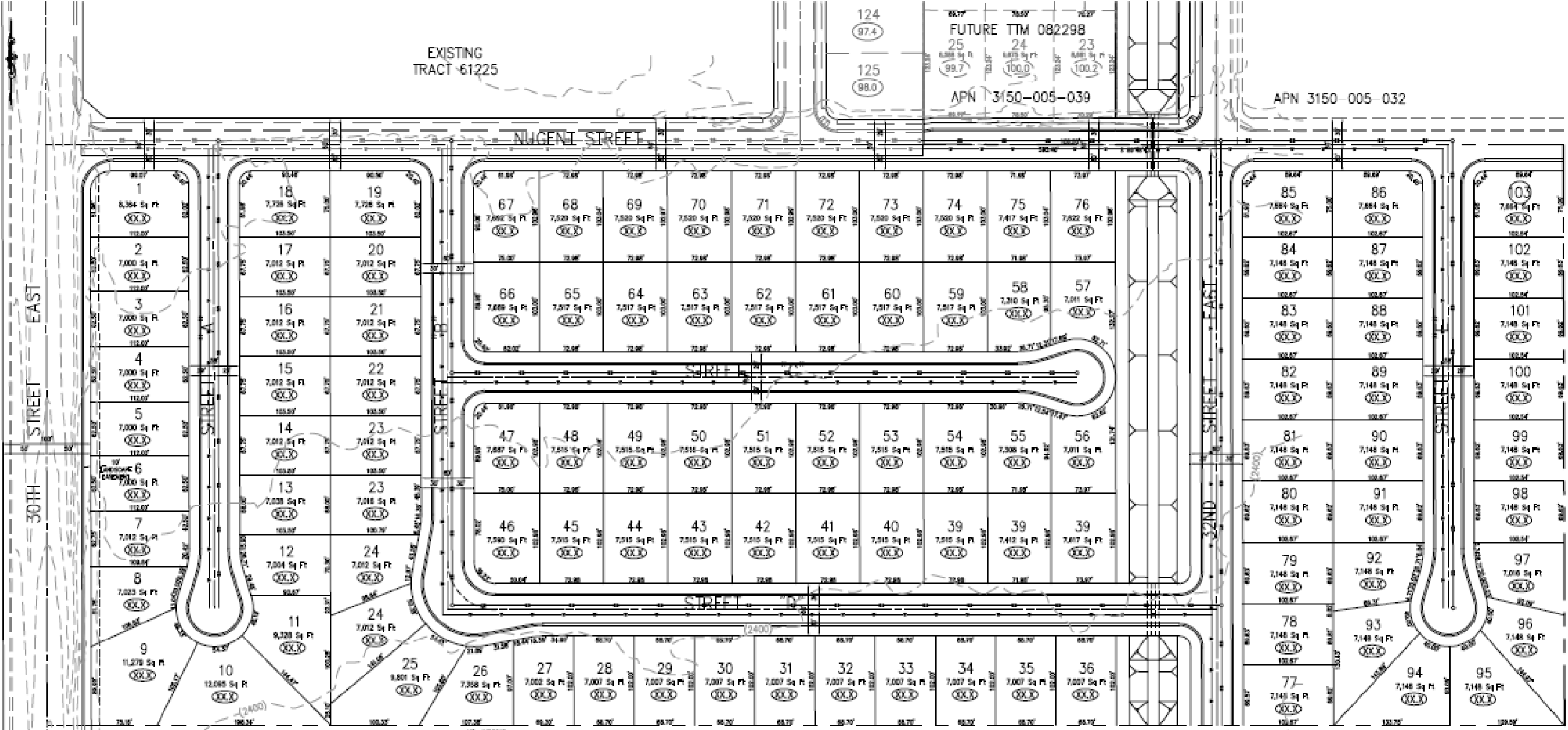
THE S 1/2 OF THE S 1/4 AND THE S 1/4 OF THE S 1/4, BOTH OF THE S 1/4 OF SEC 17, T1N 31N, R1E, S 1/4 IN THE CITY OF LANCASTER, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA

EASEMENT NOTES

- AN EASEMENT AFFECTING THE PORTION OF SAID LAND AND FOR THE PURPOSES STATED HEREIN, AND INCIDENTAL PURPOSES
 FOR: HURLEY PURPOSES
 RECORDED: OCTOBER 18, 2011, BOOK 0594, PAGE 374, S 1/4
 AFFECTS: THE NORTHERLY 50% OF SAID LAND
- AN EASEMENT AFFECTING THE PORTION OF SAID LAND AND FOR THE PURPOSES STATED HEREIN, AND INCIDENTAL PURPOSES
 FOR: HURLEY PURPOSES
 RECORDED: BOOK 0594, PAGE 381, OF RECORD
 AFFECTS: THE NORTHERLY 50% OF SAID LAND
- AN EASEMENT AFFECTING THE PORTION OF SAID LAND AND FOR THE PURPOSES STATED HEREIN, AND INCIDENTAL PURPOSES
 FOR: PUBLIC ROAD AND BURNING
 RECORDED: OCTOBER 18, 2011, BOOK 0594, PAGE 374, S 1/4
 AFFECTS: THE EASTERLY 50% OF THE NORTHERLY 50% OF SAID LAND

LEGEND

- 35 LOT NUMBER
 (XX.X) FIN ELEVATION
 AND 2.00' TO ALL ELEVATIONS SHOWN
 --- TRACT BOUNDARY
 --- PROPOSED P.U.M. WALL, CURB, & GUTTER
 --- EXISTING P.U.M. WALL, CURB, & GUTTER
 --- FUTURE P.U.M. WALL, CURB, & GUTTER
 --- DRAINAGE WATER
 --- PROPOSED SEWER
 --- DRAINAGE WATER
 --- PROPOSED WATER
 --- PROPOSED STORM DRAIN
 --- PROPOSED GATE BRIDGE
 --- PROPOSED BLOCK WALL



ITEM	A OUT/CUBIC YDS.	B FILL/CUBIC YDS.
1. RAW VOLUMES - ORIG.	X,XXX	X,XXX
2. SUBSIDENCE LOSS - 0.02' (X,XXX) X (1/2)/2'		XXX
3. OVERDIGGATION - PADS 3' OVER 4'-12" SCAFFOLDING (X,XXX) X (1/2)'	X,XXX	X,XXX
4. OVERDIGGATION - PADDED AREAS 1' OVER 4'-12" SCAFFOLDING (X,XXX) X (1/2)'	X,XXX	X,XXX
5. SUBTOTALS	X,XXX	X,XXX
6. OVERDIGGATION @ 10% (X,XXX) X (1/2) X 10%		X,XXX
7. TOTALS	X,XXX	X,XXX
8. BALANCE ON SITE		X,XXX

UTILITIES

SOUTHERN CALIFORNIA Edison
 PO BOX 4249
 4000 10TH STREET WEST
 LANCASTER, CA 93534
 (818) 865-4327

THE GAS COMPANY
 4400 10TH STREET WEST
 LANCASTER, CA 93534
 (818) 792-2343

LOS ANGELES COUNTY WATERWORKS
 DISTRICT 40 REGION 34
 280 E AIR R-3
 LANCASTER, CA 93536
 PHONE (818) 243-1467
 FAX (818) 733-7527

CITY OF LANCASTER
 600 WASHINGTON
 4000 10TH STREET WEST
 LANCASTER, CA 93534
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LANCASTER
 4000 10TH ST WEST
 PALMDALE, CA 93550
 (805) 874-3339

LA COUNTY SANITATION
 DISTRICT 1
 1855 WINDYBELL HILL RD
 WENTZIE, CA 93891
 (818) 948-1308

PROJECT DATA

DATE OF SURVEY: 11/14/2020
 EXISTING LAND USE: VACANT
 EXISTING LAND USE: NORTH - 0%
 SOUTH - 0%
 EAST - VACANT
 WEST - VACANT
 EXISTING ZONING: R - 1000
 PROPOSED ZONING: R - 1000
 GROSS AREA: 1,034,410 SQ FT
 NET AREA: 1,034,410 SQ FT
 TOTAL RESIDENTIAL UNITS: 103
 GROSS DENSITY: 0.08 UNITS/SQ FT
 NET DENSITY: 0.08 UNITS/SQ FT
 ADJACENT PARCEL NO: 3150-005-008

ENGINEER'S STATEMENT OF SIGNATURE

I HEREBY CERTIFY THAT THIS TRACT MAP WAS PREPARED UNDER MY SUPERVISION AND I AM A LICENSED PROFESSIONAL ENGINEER AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND THAT ALL EASEMENTS OF RECORD ARE SHOWN FOR THE PORTION OF SAID PARCEL UNDER TITLE INSURANCE COMPANY, ETC.

K.M. Miller
 KIM MILLER
 REG NO 040826
 DATE 12/4/2020
 CIVIL



PREPARED FOR:

ROYAL INVESTORS GROUP
 5555 WILSON BLVD
 SUITE 702
 BEVERLY HILLS, CA 90212
 (310) 407-1000



TENTATIVE TRACT NO. 083315 CITY OF LANCASTER

DESIGNED	KM	SCALE	1"=60'	DWG. NAME	TMB3315	SHEET	1 OF 1
DRAWN	CV	DATE	12/4/20	PROJECT NO.	TBO	SHEETS	
CHECKED	RO						

Figure 1
 Project Site Plan